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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/499,027      | 02/07/2000  | Masahiro Hosoda      | 900-318             | 9626             |

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EXAMINER

FLORES RUIZ, DELMA R

ART UNIT PAPER NUMBER

2828

DATE MAILED: 03/13/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/499,027

Applicant(s)

HOSODA ET AL.

Examiner

Delma R. Flores Ruiz

Art Unit

2828

-- **Th MAILING DATE of this communication appears on the cover sheet with the correspondenc address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 24 December 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-11, 16 and 17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11, 16 and 17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

  
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## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 – 10 and 16 – 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Paoli (5,699,375).

***Regarding claim 1,*** Paoli discloses a semiconductor laser device comprising; a plurality of semiconductor laser (see Fig. 1, Character 130 and 140) resonators having different light emitting active layers (see Fig. 1, Character 108 and 112) of materials different (Column 3, lines 62 – 68) from each other, the semiconductor laser resonators being provided on the same semiconductor substrate (see Fig. 1, Character 102) so that the light emitting layers lie substantially in parallel to a main surface of the semiconductor substrate, and a high-resistance region provided between the semiconductor laser resonators (Figs 1 – 4).

**Regarding claims 2, 3, and 17**, Paoli discloses a semiconductor laser device, wherein the semiconductor substrate is GaAs substrate (Column 3, lines 58 – 59) and the light emitting layers of the semiconductor laser resonators contain Group V element different from each other and the Group V elements are selected from the group consisting of P, As, Sb and N (Column 3, lines 58 – 59, Column 9, lines 3 – 33).

**Regarding claim 4 and 5** Paoli discloses a semiconductor laser resonators comprises two resonators having oscillation wavelength in a red region and infrared region, respectively and substrate is a GaAs substrate, and the resonator having an oscillation wavelength in a red region includes a light emitting layer formed of an InGaP based material and the resonator having an oscillation wavelength in an infrared region includes a light emitting layer formed of a GaAs based material (see Fig. 1, Character 130, and 140, Column 3, lines 58 – 59, Column 4, lines 32 – 44, Column 8, Lines 18 – 24, Column 9, lines 3 – 33, Column 16 Lines 49 – 68, and Column 17, Lines 1 – 3).

**Regarding claim 6**, Paoli discloses the light emitting layers of the semiconductor laser resonators lie at substantially the same distance from the main surface of the semiconductor substrate (Figs 1 – 4).

**Regarding claim 7 and 8**, Paoli discloses a semiconductor laser resonators each have a refractive index wave-guiding structure and the high resistance regions is

formed as a sufficient air gap and high resistively semiconductor layer having a sufficient resistance for electrically isolating adjacent semiconductor laser resonator (said limitation only recites facts and features that are well known and expected, the same features that essentially result from the use or application of a semiconductor laser resonators each have a refractive index wave-guiding structure and the high resistance regions is formed as a sufficient air gap and high resistively semiconductor layer having a sufficient resistance for electrically isolating adjacent semiconductor laser resonator , and therefore said limitations are said to be inherently disclosed in the teachings of Paoli).

**Regarding claims 9 and 10**, Paoli discloses the high resistance region is formed as a sufficient is formed a high resistivity semiconductor layer having a sufficient resistance for electrically isolating adjacent semiconductor laser resonator and the high-resistivity semiconductor laser is formed by implanting protons or gallium ions (Column 5, lines 23 – 26, Column 7, Lines 56 – 63, Column 12, Lines 7 – 14).

**Regarding claim 16**, Paoli discloses a semiconductor laser device comprising; first and second semiconductor laser (see Fig. 1, Character 130 and 140) resonators provided on the same semiconductor substrate (see Fig. 1, Character 102) an active layer of the first laser resonator being of a different material than an active layer of the

second laser resonator (see Fig. 1, Character 108 and 112, Column 3, lines 62 – 68); the active layer of the second laser resonator being provided in a groove, whereas the active layer of the active layer of the first laser resonator is not provided in a groove; and a high- resistance region provided at least along a sidewall of the groove in which the active layers of the second laser resonator is provided, the high resistance region comprising ions/ and/or protons implanted into the sidewall of the groove (Column 5, Lines 23 – 25, Column 7, Lines 56 – 64, Column 12, Lines 7 – 14, and Column 13, Lines 30 – 37)

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Paoli (5,699,375) in view of Doi et al (5,793,790).

**Regarding claim 11**, Paoli discloses the claimed invention except for incorporated in a recording and reproducing apparatus capable of performing recording and reproducing for both CD and DVD. It would have been obvious at the time of applicant's invention, to combine Doi of teaching an incorporated in a recording and reproducing apparatus capable of performing recording and reproducing for both CD and DVD with semiconductor laser device because the CD and DVD use to reproducing and data reading operation. The semiconductor laser device is usually incorporated for use in an optical pick up in a recording and reproducing apparatus capable of performing the recording and reproducing operation.

### ***Response to Arguments***

Applicant's arguments with respect to claims 1-11, and 16-17 have been considered but are moot in view of the new ground(s) of rejection.


### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Delma R. Flores Ruiz whose telephone number is (703) 308-6238. The examiner can normally be reached on M - F.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Ip can be reached on (703) 308-3098. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-3431.

  
Delma R. Flores Ruiz  
Examiner  
Art Unit 2828

  
Paul Ip  
Supervisor Patent Examiner  
Art Unit 2828

DRFR/PI  
March 7, 2003